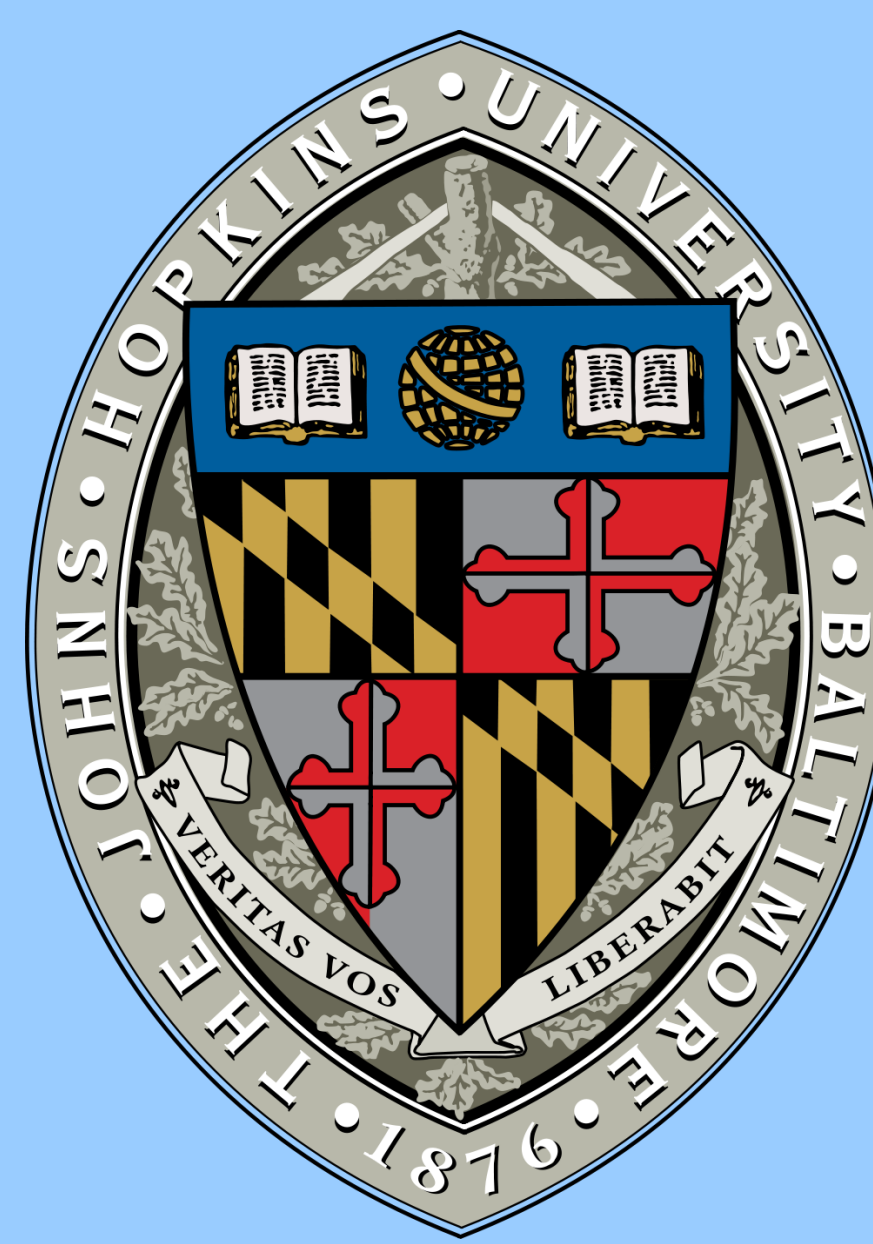


The Application of Emergency Medicine Dispatch Principles to the Dispatching of Rapid Response Teams Within Johns Hopkins Hospital

Tiffany Price, Fuld Fellow
 Johns Hopkins School of Nursing
 Scott Newton, Johns Hopkins Hospital



I Background

Because many patients show physiological deterioration hours before cardiac or pulmonary arrest and delays in treatment are associated with lower survival and poorer outcomes, many hospitals have implemented rapid response teams (RRT's) to supplement their Code teams. (Gerdik, Vallish, Miles, Godwin, Wludyka & Panni, 2010).

At Johns Hopkins Hospital, there are over 20 different teams available to be dispatched by Hopkins Lifeline/Communications (HopComm) based on geography, patient population, and the nature of the emergency.

Currently, the individual who is calling HopComm specifies what team they need and where to send it, which allows for significant variability from person to person.

Therefore, the hospital began developing changes for a new dispatching process that would improve reliability.

This quality improvement project aimed to use lean methodology to develop the questions that Hopkins Lifeline/Communications (HopComm) dispatchers would use in determining which RRT should be sent.

2 Methods

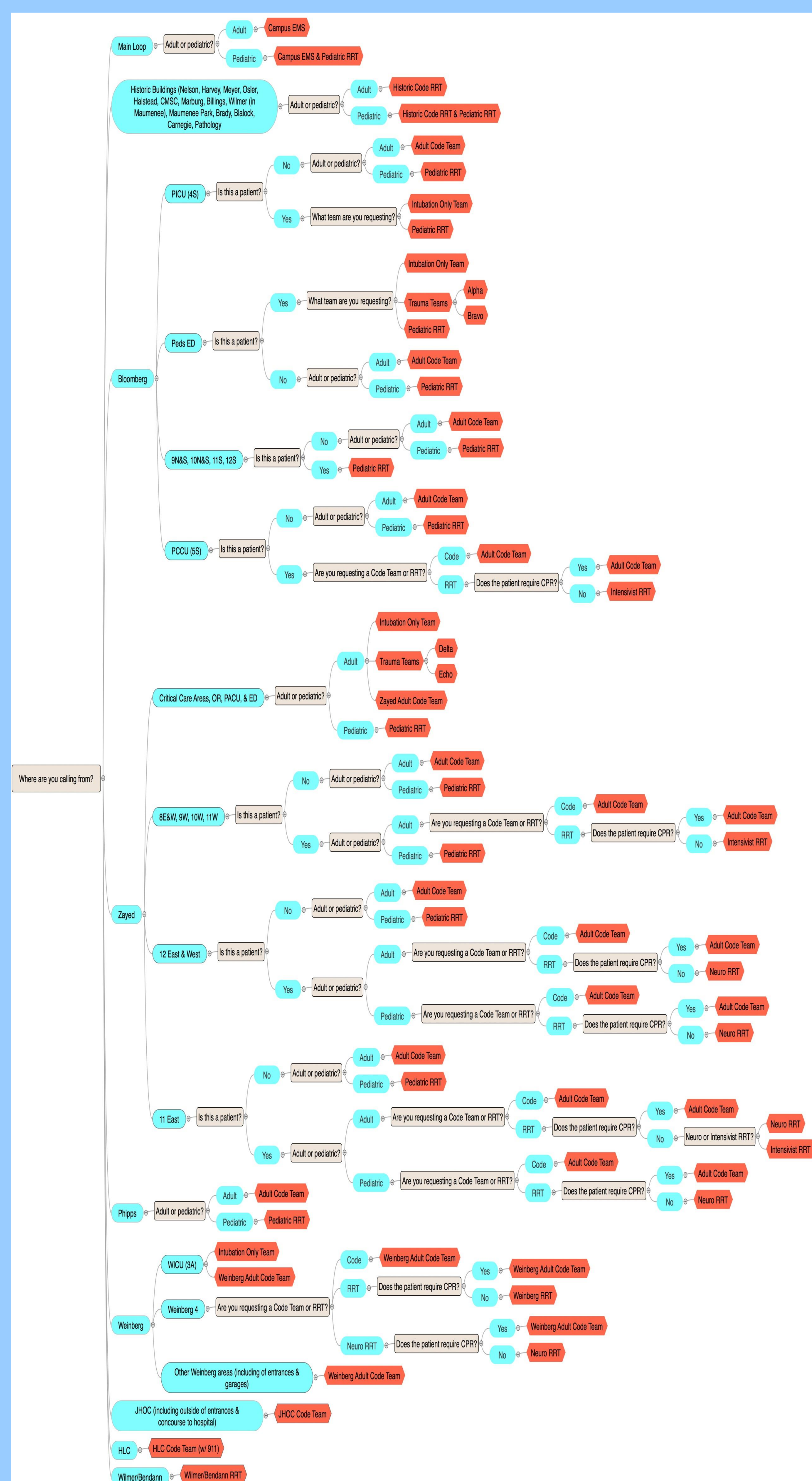
The project utilized a mixed-method approach. Methods included:

- Review of the existing literature on high reliability organizations (HRO's), rapid response teams (RRT's), and emergency medicine dispatching (EMD) principles
- Review of the Johns Hopkins Hospital Interdisciplinary Clinical Practice Manual on Cardiopulmonary Resuscitation (Arrest/Code) and Rapid Response Teams
- 16 hours observing HopComm operations, specifically the RRT dispatching process
- Semi-structured interviews of HopComm dispatchers and Lifeline nurses (4 dispatchers & 2 nurses)

3 Results

As shown in the figure above, the final decision-making algorithm yielded the following results:

- 17 location categories across 21 buildings
- 2 age categories
 - Adult & pediatric
- 5 non-age-related specialty categories
 - Code, RRT, neuro, trauma, EMS
- 62 possible pathways to final decision



4 Conclusions

The goal of this quality improvement project was to increase the reliability of rapid response team dispatching within Johns Hopkins Hospital by simplifying and streamlining the dispatching process.

However, while the decision-making algorithm would likely increase reliability, the primary outcome of the project was to demonstrate the complexity of the current system.

5 Future Directions

Given the complexity of the current rapid response team dispatching process, Johns Hopkins Hospital and Lifeline have decided to consider a massive overhaul of the rapid response team protocol.

For the next stage of this quality improvement project, a committee has been formed to reexamine the number and structure of rapid response teams, in order to further simplify the process.

6 References

Gerdik, C., Vallish, R.O., Miles, K., Godwin, S.A., Wludyka, P.S., & Panni, M.K. (2010). Successful implementation of a family and patient activated rapid response team in an adult level 1 trauma center. *Resuscitation*. 81(12):1676-81. doi: 10.1016/j.resuscitation.2010.06.020.

Funding Source:

The Helene Fuld Leadership Program for the Advancement of Patient Care Quality and Safety